

19. 04. 2004

(90)

-27-

15-04-2004

Amended claims

- 5 1. A composition of matter in isolated form comprising polysaccharides derivable from *Aloe vera* with the following characteristics:
- a) the polysaccharides comprise 60 - 100 % D-mannose, 40 - 0 % D-glucose and 0 - 10 % other monosaccharides
 - b) the polysaccharides are negatively charged
 - 10 c) the polysaccharides bind to a positively charged column
 - d) the average molecular weight is higher than 50 kD.
2. A composition of matter in isolated form according to claim 1 comprising polysaccharides derivable from *Aloe vera* with the following characteristics:
- 15 a) the polysaccharides comprise 70 - 90 % D-mannose, 30 - 10 % D-glucose and 0 - 10 % other monosaccharides
 - b) the polysaccharides are negatively charged
 - c) the polysaccharides bind to a positively charged column.
- 20 3. A composition of matter according to claim 1 or 2 wherein said polysaccharides have an average molecular weight of about 100 - 300 kD.
4. A composition of matter according to according to any one of the claims 1 - 3 wherein said polysaccharides comprise D-mannose and D-glucose in a ratio of a
- 25 range of about 5 to 20.
5. Process to prepare a composition of matter according to any one of the claims 1 - 4 characterized by the following process steps:
- a) subfractionation of an *Aloe vera* extract in two fractions, one with an apparent
 - 30 molecular weight of $> \pm 5$ kD, named subfraction I and one with an apparent molecular weight of $< \pm 5$ kD

ART 34

-28-

- b) passing of subfraction I over a positively charged column
- c) eluting the part of subfraction I bound to said column with a salt solution, resulting in subfraction I-D₁
- d) desalting and ultrafiltration of I-D₁
- 5 e) optionally preparation of subfractions of I-D₁ with desired apparent molecular weights of > 300 kD, 100 - 300 kD and 50 - 100 kD .

6. Process according to claim 5 characterized by the application of a pre purification step before process step a over a Sephadex G-25 column to remove
10 materials with affinity for said column.

7. Process according to claim 5 or 6 characterized by the application of a DEAE-Sephadex or DEAE-Sepharose column during process step b.

15 8. Process according to anyone of the claims 5 - 7 characterized by the application of sequential ultra filtration or preparative FPLC over a Superose column.

9. Plant or animal NAG-25 extract comprising a composition of matter as defined in any one of the claims 1- 4.
20

10. Plant NAG-25 extract according to claim 9 with the plant being *Aloe*.

11. Plant NAG-25 extract according to claim 10 with the *Aloe* being *Aloe vera*.

25 12. Process to prepare a plant or animal NAG-25 extract as defined in any one of the claims 9 - 11 characterized by the application of a purification step of a corresponding untreated extract over a Sephadex G-25 column to remove materials with affinity for said column.

30 13. *Aloe* ultra filter extract comprising a composition of matter as defined in any one of the claims 1- 4.

ART 34 AMDT

-29-

14. Process to prepare an *Aloe* ultra filter extract as defined in claim 13 characterized by the application of ultra filtration on the corresponding *Aloe* extract.
15. Use of a composition of matter elected from one or more of the following ones:
5 composition of matter as defined in any one of the claims 1 - 4 or plant or an animal NAG-25 extract as defined in any one of the claims 9 - 11 or an *Aloe* ultra filter extract as defined in claim 13 as food supplement or in dietary foods.
16. Use of a composition of matter elected from one or more of the following ones:
10 composition of matter as defined in any one of the claims 1 - 3 or plant or an animal NAG-25 extract as defined in any one of the claims 8 - 10 or an *Aloe* ultra filter extract as defined in claim 13 in personal care or in cosmetics.
17. Use of a composition of matter elected from one or more of the following ones:
15 composition of matter as defined in any one of the claims 1 - 3 or plant or an animal NAG-25 extract as defined in any one of the claims 8 - 10 or an *Aloe* ultra filter extract as defined in claim 13 in pharmaceutical care.
18. Use of a composition of matter according to any one of the claims 15 - 17 for
20 one or more of the following applications: as anti-bacterial, anti-viral and anti-inflammatory means.
19. Use of a composition of matter according to claim 18 to prevent or heal an
25 infection with any one of the microorganisms bacteria, viruses and fungi.
20. Use of a composition of matter according to claim 19 to prevent an infection with one or more of the bacteria selected from the group consisting of *Helicobacter pylori*, *Pseudomonas aeruginosa*, *Streptococcus mutans* and *Streptococcus sanguis*.
- 30 21. Use of a composition of matter according to claim 17 as a medicament in prevention or healing of an infection with infectious microorganisms or in prevention

ART 34 AMBT

-30-

and healing of inflammations.

22. Oral dosage form as a tablet, capsule or syrup comprising a composition of matter elected from one or more of the following ones:

5 composition of matter as defined in any one of the claims 1 - 4 or plant or an animal NAG-25 extract as defined in any one of the claims 9 - 11 or an *Aloe* ultra filter extract as defined in claim 13 and optionally excipients.

10 23. Topical dosage form as a cream or gel comprising a composition of matter elected from one or more of the following ones:
composition of matter as defined in any one of the claims 1 - 4 or plant or an animal NAG-25 extract as defined in any one of the claims 9 - 11 or an *Aloe* ultra filter extract as defined in claim 13 and optionally excipients.

15 24. Injectable dosage form as an injection liquid comprising a composition of matter elected from one or more of the following ones:
composition of matter as defined in any one of the claims 1 - 4 or plant or an animal NAG-25 extract as defined in any one of the claims 9 - 11 or an *Aloe* ultra filter extract as defined in claim 13 and optionally excipients.

20 25. A method of inhibiting, preventing or reversing adherence of a micro organism to a cell membrane in a living organism comprising administering to said organism a dosage form according to anyone of the claims 22 - 24.

25 26. Use of a dosage form according to anyone of the claims 22 - 24 for the manufacture of a medicament for inhibiting, preventing or reversing adherence of a micro organism to a cell membrane in a living organism.

30